

REMARKS

Reconsideration and allowance of all the pending claims are respectfully requested in light of the following remarks.

The Office Action dated July 30, 2002 has been carefully reviewed. Claim 1 (as amended above, 2-5, 13-16 and 18 remain pending.

(1) The drawing objection has been traversed because the Applicants have amended claim 1 to recite a "repeated" spoken digit string rather than a second spoken digit string. Applicants also respectfully note that the USPTO issues thousands of patents each year without any drawings, particularly in the chemical and biotechnology arts. 37 C.F.R. 1.83(a) is not a requirement that every claimed feature *must, according to federal regulation*, be shown. The claimed features need to be shown in a drawing *to the extent necessary for an artisan to understand their relationship to other elements*, and it is not an *ipso facto* requirement that all elements must be illustrated if claimed. While it is believed that Applicants' amendment of the term "second" to "repeated" resolves the issue, the addition of a box labeled "second digit string" in the flowchart would not be required to aid an artisan in understanding of the claimed invention.

(2) The rejection of claims 1-5,7, 13-16 and 18 under 35 U.S.C. §112, first paragraph is overcome by the change of "second" to "repeated" in claim 1.

(3) The rejection of claim 18 under 35 U.S.C. §112, second paragraph is overcome by the Applicants' amendment to same.

Summary of the Art-Based Rejections:

Claims 1-5, 7, 13-16 and 18 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Goldberg (U.S. 6,122,612) in view of Waibel et al. (U.S. 5,712,957, hereafter "Waibel").

Applicants' Traversal:

It is respectfully submitted that the combination of Goldberg and Waibel fails to disclose or suggest all of the elements recited in Applicants' claims.

Inter alia, instant claim 1 recites a method of recognizing a spoken digit string that includes generating a list of hypothesized digit strings arranged in a ranked order of likelihood, determining whether the hypothesized strings satisfy a given constraint, selecting the first string in the list if the constraint has been determined, if not, then prompting a repeat of the spoken digit string, analyzing the repeated digit string to generate a second list of hypothesized digit strings, and then, one of (i) selecting the recognized string in accordance with a comparison of the first and second list if the constraint is satisfied, (ii) performing additional verification techniques to

determine the correct digit string until the constraint is satisfied, and then subsequently selecting the correct digit string.

Applicants note that support for the amendment to claim 1 is clearly found at least at page 8, lines 20-23. The additional verification techniques can include having the person speak a second string that is not a repeat of the first string but a rephrase of what was uttered. Otherwise, if both the first string and second string are completely outside of constraint criteria, a digit string could otherwise be selected that is inaccurate. Sometimes, a person might have, for example, mumbled the phrase, or needed to clear their throat, and a pure repeat (Sans the mumbling, coughing) can be sufficient. If the first and second lists are still outside of a constraint, picking the most likely one may do little to serve the person who is conversing with the system to attempt to receive some sort of information in return from his/her utterances.

It is respectfully submitted that the combination of Goldberg and Waibel fails to disclose, suggest, or motivate an artisan to modify the teachings of the combination such that claim 1 would have been obvious to a person of ordinary skill in the art at the time of the invention. Goldberg clearly fails to request repeat and then alternative verification techniques, and Waibel fails to teach the use of alternative verification, and merely selects the highest of scores between the first N-best list and second N-best list.

Furthermore, The Court of Appeals for the Federal Circuit
has held that:

The mere fact that the prior art
may be modified in the manner suggested
by the Examiner does not make the
modification obvious unless the prior art
suggested the desirability of the modification.

In re Fritch, 973, F.2d 1260,1266, 23 U.S.P.Q. 2d 1780, 1783-
84 (Fed. Cir. 1992). Here, the Office Action has not set forth a
prima facie case of obviousness as the suggested desirability is
not contained in anything cited in the combination of references.

Accordingly, reconsideration and withdrawal of this ground of
rejection are respectfully requested.

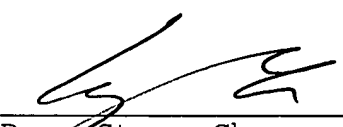
For all the foregoing reasons, it is respectfully submitted
that all grounds of objection and rejection have been overcome. A
Notice of Allowance is respectfully requested.

Should the Examiner deem that there are any issues, which may
be best, resolved by telephone communication, please contact
Applicant's undersigned Attorney at the number listed below.

Respectfully submitted,

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Serial No.

09/222,073

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Inventors : Thomas B. SCHALK Art Unit: 2654
Application No.: 09/222,073 Examiner: Abdul K. Azad
Filed : July 1, 1999
For : KNOWLEDGE-BASED STRATEGIES APPLIED TO N_BEST
LISTS IN AUTOMATIC SPEECH

VERSION WITH MARKINGS SHOWING CHANGES MADE

Assistant Commissioner for Patents
U.S. Patent and Trademark Office
Washington, DC 20231

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In response to the Office Action dated July 30, 2002, Applicant hereby requests amendment of the above-identified application as follows:

IN THE CLAIMS:

1. (Twice Amended) A method of recognizing a spoken digit string, comprising:

- (a) receiving the spoken digit string;
- (b) analyzing the spoken digit string to generate a list of hypothesized digit strings arranged in ranked order based on a likelihood of matching the spoken digit string;
- (c) determining whether individual hypothesized strings of said list satisfy a given constraint, using a given knowledge based recognition strategy;

(d) selecting the first string in the list satisfying the constraint as the recognized string,

if none of the hypothesized digit strings satisfy the constraint,

(e) prompting entry of a [second] repeated spoken digit string, which is a repeat of the spoken digit string entered in step

(a);

(f) analyzing the [second] repeated spoken digit string to generate a second list of hypothesized digit strings arranged in ranked order based on a likelihood of matching the [second] repeated spoken digit string; and one of:

(g) (i) selecting the recognized string in accordance with a comparison of the first and second list if the constraint is satisfied; or

(ii) performing additional verification techniques to determine the correct digit string until the constraint is satisfied, and then subsequently selecting the correct digit string.

18. (Amended) The method of Claim 1 further comprising the step of prompting entry of a spoken digit string prior [to] in step

(a) at a predetermined amount of time before executing step (b).